



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE  
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES**

Appellants : DANA EAGLES  
Serial No. : 10/717,859  
Filed : NOVEMBER 19, 2003  
For : INDUSTRIAL TEXTILE FABRIC  
Examiner : KUMAR, PREETI  
Art Unit : 1751  
Confirmation No. : 9489

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Ronald R. Santucci, Reg. No. 28,988  
(Name of Applicant, Assignee or Registered Representative)

A handwritten signature in dark ink, appearing to read "Ronald R. Santucci", written over a horizontal line.

Signature

April 20, 2007

Date of Signature

**APPEAL BRIEF OF APPELLANT**

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Alexandria, Virginia 22313-1450

Sir:

This is an Appeal from the Final Rejection by the Examiner dated August 24, 2006, which issued in the above-identified application, finally rejecting claims 26-56; and from the Pre-Appeal Brief Conference decision dated March 21, 2007, confirming the rejections. A Notice of Appeal was filed on January 29, 2007. This Brief is submitted in accordance with 37 C.F.R. § 41.37 and is accompanied by the requisite fee of \$500.00 set forth in 37 C.F.R. § 41.20.

The Commissioner is authorized to charge any additional fee, or credit any overpayment, to  
Deposit Account No. 50-0320.

### **REAL PARTY IN INTEREST**

The real party in interest is Albany International Corp., 1373 Broadway, Albany, New York 12204, to which Appellant has assigned all interest in, to and under this application, by virtue of an assignment recorded on June 14, 2004 at reel 015467, frame 0245 of the assignment records of the Patent and Trademark Office.

### **RELATED APPEALS AND INTERFERENCES**

Upon information and belief, the undersigned attorney does not believe that there is any appeal or interference that will directly affect, be directly affected by or have a bearing on the Board's decision in the pending appeal.

### **REQUEST FOR AN ORAL HEARING**

At this time, Appellant reserves the right to timely request an oral hearing in accordance with 37 C.F.R. § 41.47(b).

### **STATUS OF THE CLAIMS**

The Application was filed with claims 1-56 on November 19, 2003, and assigned Application Serial No. 10/717,859.

In a first Office Action dated December 13, 2005, the Examiner issued an election/restriction requirement restricting the claims to one of the groups containing claims 1-21, 22-25 and 26-56.

In response to this first Office Action, Appellant elected claims 26-56 for further prosecution in the application.

The Examiner then issued a further Office Action on April 6, 2006. In this action, the Examiner rejected claim 43 under 35 U.S.C. §112, second paragraph, as being indefinite. Further, claims 26-56 were rejected under 35 U.S.C. 102(b) as allegedly anticipated by or, in the alternative under 35 U.S.C. §103(a) as allegedly obvious over U.S. Patent No. 5,888,915 to Denton et al. (hereinafter merely "Denton"). Claims 26-56 were rejected under 35 U.S.C. 102(b) as allegedly anticipated by or, in the alternative under 35 U.S.C. §103(a) as allegedly obvious over U.S. Patent No. 5,360,656 to Rexfelt et al. (hereinafter merely "Rexfelt"). Claims 26-56 were rejected under 35 U.S.C. 102(b) as allegedly anticipated by or, in the alternative under 35 U.S.C. §103(a) as allegedly obvious over U.S. Publication No. 2002/0139503 to Davenport (hereinafter merely "Davenport").

In response to the office action, Appellant filed an Amendment on June 8, 2006 amending claim 43 to overcome the §112 rejection and arguing against the §§102 & 103 rejections.

The Examiner issued a Final Office Action on August 24, 2006, withdrawing the §112 rejection and maintaining the §§102 & 103 rejections from the previous Office Action.

A response to the Final Office Action by Appellant was filed on October 23, 2006 arguing against the rejections.

The Examiner issued an Advisory Action dated November 22, 2006, indicating that the Appellant's request for reconsideration did not place the application in condition for allowance.

A response to the Advisory Action by Appellant was filed on December 14, 2006, amending claim 26 and arguing against the rejections.

The Examiner issued a further Advisory Action on January 19, 2007, indicating that the claim amendments did not place the application in condition for allowance.

A Notice of Appeal along with a Pre-Appeal Brief Request for Review was filed on January 29, 2007, appealing the final rejection of these claims.

A Notice of Panel Decision from the Pre-Appeal Brief Review was issued March 21, 2007, confirming the claim rejections. This Appeal Brief is being filed pursuant to this Notice of Appeal. Accordingly, the status of the claims may be summarized as follows:

Claims allowed:       None;

Claims objected to:   None;

Claims rejected:       26-56.

The rejected claims 26-56 are set forth in the Appendix attached hereto. Appellant is appealing the Final Rejection of claims 26-56, which constitute all of the currently pending claims in this application.

#### **STATUS OF THE AMENDMENTS**

Appellant believes that all the submitted Amendments have been entered.

#### **SUMMARY OF THE CLAIMED SUBJECT MATTER**

The citations to Figures and/or Specification locations in U.S. Patent Application Publication No. 2005/0102763 (“the instant application”) are provided immediately following the elements of the independent claims, which are summarized below. Such citations, however, are provided merely as examples and are not intended to limit the interpretation of the claims or to evidence or create any estoppel. Support for each of these claims can be found throughout the specification as originally filed.

Claim 26 is independent, with claims 27-56 directly or indirectly dependent on claim 26.

Independent claim 26 is directed to a textile structure (page 7, lines 4-6; Fig. 4) made in a manner comprising the steps of spiral winding machine direction yarns (42) to form a system having a defined width; and depositing a pattern of cross machine direction elements (40) onto said system of MD yarns (page 7, lines 7-13; Fig. 4); wherein said CD elements (40) are formed while being deposited onto said system of MD yarns (page 7, lines 13-15; Fig. 4).

Claim 27 is directed to the textile structure claimed in claim 26, wherein the CD elements connect the MD yarns so to fix their position and stabilize the structure.

Claim 28 is directed to the textile structure claimed in claim 26, wherein the MD yarns are intermittently encapsulated by the CD elements along the length of the MD yarns.

Claim 29 is directed to the textile structure claimed in claim 26, wherein the CD elements extend the full width of the MD yarn system.

Claim 30 is directed to the textile structure claimed in claim 26, wherein the CD elements extend less than the full width of the MD yarn system.

Claim 31 is directed to the textile structure claimed in claim 26, wherein the CD elements are created on the MD yarn system by depositing a polymer resin orthogonally thereto on one or both surfaces thereof so to obtain a system of CD elements interlocking with the MD yarns.

Claim 32 is directed to the textile structure claimed in claim 31, wherein the pattern created on the MD yarn system is varied by controlling the deposition of the polymer thereon.

Claim 33 is directed to the textile structure claimed in claim 32, wherein a speed of the deposition is controlled so as to adjust the amount of polymer on the MD yarn system.

Claim 34 is directed to the textile structure claimed in claim 31, wherein the polymer is delivered using one or more dispensers.

Claim 35 is directed to the textile structure claimed in claim 31, wherein the polymer is delivered to both surfaces of the MD yarn system so to join and bond the MD yarn system therebetween.

Claim 36 is directed to the textile structure claimed in claim 31, wherein the deposited polymer is curable by one of UV light or heat.

Claim 37 is directed to the textile structure claimed in claim 36, wherein the deposited polymer is subsequently cured to obtain a solid system of CD elements.

Claim 38 is directed to the textile structure claimed in claim 31, wherein the deposited polymer is molten polymer and is subsequently cooled to obtain a solid system of CD elements.

Claim 39 is directed to the textile structure claimed in claim 38, wherein the molten polymer is derived by melting monofilament used as feedstock.

Claim 40 is directed to the textile structure claimed in claim 26, wherein the CD elements are created on the MD yarn system by positioning CD monofilaments orthogonally thereto on one or both surfaces thereof; heating the CD monofilaments so they distort; and cooling the CD monofilaments to obtain a system of CD elements mechanically interlocking with the MD yarns.

Claim 41 is directed to the textile structure claimed in claim 40, wherein the CD monofilaments are positioned on both sides of the MD system so to join and bond the MD yarn system therebetween.

Claim 42 is directed to the method of claim 40, wherein the CD monofilaments are a polymer able to be bondable whilst maintaining its functional strength.

Claim 43 is directed to the textile structure claimed in claim 42, wherein the polymer is one of MXD6 and poly-m-xylylene adipamide.

Claim 44 is directed to the textile structure claimed in claim 40, wherein the CD monofilaments are bicomponent monofilaments having a sheath and a core, and the sheath has a melting point lower than the core.

Claim 45 is directed to the textile structure claimed in claim 26, wherein the textile structure formed is machine seamable or endless.

Claim 46 is directed to the textile structure claimed in claim 26, wherein the textile structure formed is a forming, press, dryer, TAD, pulp forming, sludge filter, chemiwasher, or engineered fabric.

Claim 47 is directed to the textile structure claimed in claim 26, wherein the MD yarns are capable of being infinitely spaced apart or close together.

Claim 48 is directed to the textile structure claimed in claim 26, wherein the CD elements contribute to fabric stability and other functional characteristics such as permeability to air and/or water, structural void volume or caliper.

Claim 49 is directed to the textile structure claimed in claim 26, wherein materials used as the CD element are not readily extrudable.

Claim 50 is directed to the textile structure claimed in claim 26, wherein the CD elements acts as shute runners on a wear side of the structure, protecting the MD yarns.

Claim 51 is directed to the textile structure claimed in claim 26, wherein high abrasion resistant polymers are used as the CD element material.

Claim 52 is directed to the textile structure claimed in claim 26, wherein a layer of batt is affixed to one or both sides of the structure.

Claim 53 is directed to the textile structure claimed in claim 26, wherein one or more nonwoven layers are laminated to the textile structure with or without batt.

Claim 54 is directed to the textile structure claimed in claim 26, wherein the textile structure is permeable.

Claim 55 is directed to the textile structure claimed in claim 26, wherein the textile structure has a smooth sheet contact side.

Claim 56 is directed to the textile structure claimed in claim 26, which includes a resin coating rendering the textile structure impermeable.

#### **GROUND FOR REJECTION TO BE REVIEWED ON APPEAL**

1. Whether claims 26-56 are allegedly anticipated by or, in the alternative obvious over Denton under §102(b) and §103(a) respectively, when:

Denton fails to teach or suggest a textile structure made in a manner comprising the steps of spiral winding machine direction (MD) yarns to form a system having a defined width; and  
depositing a pattern of cross machine direction (CD)  
elements onto said system of MD yarns; wherein said CD  
elements are formed while being deposited onto said system of  
MD yarns

as claimed in claim 26, or the combinations of claims 27-56 dependent directly or indirectly on claim 26?

2. Whether claims 26-56 are allegedly anticipated by or, in the alternative obvious over Rexfelt under §102(b) and §103(a) respectively, when:

Rexfelt fails to teach or suggest a textile structure made in a manner comprising the steps of spiral winding machine direction (MD) yarns to form a system having a defined width; and



depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns

as claimed in claim 26, or the combinations of claims 27-56 dependent directly or indirectly on claim 26?

3. Whether claims 26-56 are allegedly anticipated by or, in the alternative obvious over Davenport under §102(b) and §103(a) respectively, when:

Davenport fails to teach or suggest a textile structure made in a manner comprising the steps of spiral winding machine direction (MD) yarns to form a system having a defined width; and

depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns

as claimed in claim 26, or the combinations of claims 27-56 dependent directly or indirectly on claim 26?

## **ARGUMENTS**

### **I REJECTIONS UNDER 35 U.S.C. §§ 102(b) & 103(a) CANNOT STAND**

#### **1. Denton does not teach or suggest the instantly claimed invention**

Denton relates to paper machine clothing comprised of bicomponent fibers in both the machine and cross machine direction. Advantage is taken of the unique bicomponent fiber structure, which permits selection of different materials for the sheath and core components. For instance, the sheath material may have a melting point lower than the melting point of the core material. Accordingly, a fused, bonded structure of bicomponent fibers can be formed where the sheath component has a melting point lower than the core component. By heating a fabric

constructed of bicomponent fibers to a temperature greater than the melting point of the sheath component and lower than the melting point of the core component, with subsequent cooling of the fabric to below melt temperature of the sheath component, a fused, bonded structure is produced. *Denton*, Abstract.

In contrast, instant claim 26 recites:

“A textile structure made in a manner comprising the steps of:  
spiral winding machine direction (MD) yarns to form a system having a defined width; and  
depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns.” (emphasis added)

Nothing has been found in *Denton* that teaches or suggests the above-identified features of claim 26. Specifically, *Denton* does not teach or disclose spiral winding machine direction (MD) yarns to form a system having a defined width; and depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns, as recited in claim 26.

In the Final Office Action of August 24, 2006, the Examiner asserts that *Denton* teaches that the very nature of paper machine clothing fabrics involves a weaving process wherein the yarn filaments are orthogonal. *Id.*, col. 1, lines 50-55. The relied upon portions of *Denton*, specifically, disclose “Channels for transport are formed by the open spaces or interstices, between the warp and shute yarns. Channels also exist between the filaments at the crossover points. The weaving process limits the geometry of the pores because the yarn filaments are orthogonal.”

One of ordinary skill in the art recognizes that “warp” and “shute” yarns are used only when the fabric is “woven”, which basically involves interweaving of both warp and shute yarns

on a weaving machine. Therefore, Denton does not teach or disclose spiral winding machine direction (MD) yarns to form a system having a defined width, as recited in the instant claims.

According to the instant invention, spirally winding a system of MD yarns, typically involves first and second rolls mounted horizontally and being parallel to each other turn around means positioned in parallel between the first and second rolls and in the plane defined by the top surfaces of the two rolls. The turn around herein includes a first and second row of pins; and whereby a yarn attached to a first pin at one end of the first pin row is unwound orthogonal to the rolls, initially contacting the top of the first roll and then spiraling around the bottom of the first roll, the yarn being further unwound orthogonal to the rolls so to first contact the bottom of the second roll and then spiraling around the top of the second roll, the yarn being further unwound orthogonal to the rolls and then looping around a second pin at one end of the second pin row, and the yarn being further unwound toward the second roll in a similar fashion so that the spiral winding is repeated until a system of MD yarns of a desired width is formed. *Specification*, paragraphs 26 and 27.

The Examiner further refers to col. 4, lines 35-45 of Denton and contends that Denton teaches a patterned PMC textile having fibers arranged in the machine direction which intersect and intermittently encapsulate the fibers running in the cross machine direction in general. The relied upon portions of Denton specifically disclose: “that fibers running in the first direction intersect with fibers running in the second direction, and vice versa. For instance, fibers arranged in the machine direction will not intersect with each other and that such fibers will intersect only with fibers running in the cross machine direction. It is preferred that the clothings of the present invention be constructed of fibers running in the machine or cross machine

direction, but such clothings could be constructed of fibers which run in directions that are at angles to the machine and cross machine direction of a paper making machine.”

Nowhere in its disclosure does Denton teach or suggest depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns, as recited in the instant claims.

As to the deposition of CD elements, the specification clearly provides support wherein it recites that the CD pattern is achieved, for example, by controlling the deposition of the CD elements 40 onto the MD yarn system 42, such as by speeding up or slowing down the delivery of the polymer so to leave more or less polymer in certain areas. The specification further discloses that one of the means of creating a system of CD elements 40 is by utilizing a polymer deposition device such as a piezo jet or jets dispensing a curable polymer in a CD direction onto and between the MD yarns 42, subsequently curing which results in a solid system of CD elements 40. *Specification*, paragraphs 23 and 31. Appellant therefore submits that Denton does not teach or disclose “spiral winding” or the “deposition of a pattern of CD elements” as recited in the instant claims.

Therefore Appellant respectfully submits to the Board that claim 26 patentably distinguishes over Denton.

The Section 102(b) and 103(a) rejections based on Denton should be reconsidered and withdrawn, and such relief is respectfully requested, with prompt issuance of a Notice of Allowance.

**2. Rexfelt does not teach or suggest the instantly claimed invention**

Rexfelt relates to a press felt including a base fabric which is made of fabric of yarn material and is endless in the machine direction of the press felt, and one or more layers of fiber

material arranged on the base fabric. The base fabric of the press felt comprises at least one layer composed of a spirally-wound strip made of fabric of yarn material and having a width which is smaller than the width of the final base fabric. Longitudinal threads of the spirally-wound fabric strip of yarn material make an angle with the machine direction of the press felt. The fabric strip of yarn material may advantageously be flat-woven. *Rexfelt*, Abstract.

In contrast, instant claim 26 recites:

“A textile structure made in a manner comprising the steps of:  
spiral winding machine direction (MD) yarns to form a system having a defined width; and  
depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns.” (emphasis added)

Nothing has been found in *Rexfelt* that teaches or suggests the above-identified features of claim 26. Specifically, *Rexfelt* does not teach or disclose spiral winding machine direction (MD) yarns to form a system having a defined width; and depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns, as recited in claim 26.

In the Final Office Action, the Examiner asserts that *Rexfelt* teaches two or more spirally wound layers in which the spiral turns in the different layers are placed crosswise, such that the longitudinal threads in one layer make an angle both with the machine direction of the press felt and with the longitudinal threads in another layer. The Examiner further contends that *Rexfelt* teaches spiral winding of yarns. Appellant respectfully disagrees.

Firstly, *Rexfelt* discloses spiral winding of strips of woven fabric material (*Rexfelt*, col. 2, line 67 - col. 3, line 60) and not spiral winding of yarns, as recited in the instant claims. Specifically, *Rexfelt* does not teach or disclose spiral winding machine direction (MD) yarns to form a system having a defined width.

Furthermore, the Examiner is comparing placing spiral turns in different layers at an angle or crosswise fashion in Rexfelt with “depositing a pattern of CD elements” of the present invention. Appellant submits that although the longitudinal threads in one layer make an angle both with the machine direction of the press felt and with the longitudinal threads in another layer in Rexfelt, Rexfelt does not teach or suggest depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns, as recited in claim 26. The CD yarns in Rexfelt are a result of weaving the fabric strip and not created while being deposited on a system of MD yarns.

As explained above, according to the instant invention, depositing a pattern of CD elements is creating or forming the CD elements as they are being deposited, which is done by utilizing a polymer deposition device such as a piezo jet or jets dispensing a curable polymer in a CD direction directly onto and between the MD yarns, subsequently curing which results in a solid system of CD elements. Accordingly, Appellant submits that Rexfelt does not teach or disclose depositing a pattern of cross machine direction (CD) elements onto the system of MD yarns; wherein the CD elements are formed while being deposited onto the system of MD yarns as claimed.

Therefore Appellant respectfully submits to the Board that claim 26 patentably distinguishes over Rexfelt.

The Section 102(b) and 103(a) rejections based on Rexfelt should be reconsidered and withdrawn, and such relief is respectfully requested, with prompt issuance of a Notice of Allowance.

**3. Davenport does not teach or suggest the instantly claimed invention**

Davenport relates to an on-machine-seamable papermaker's fabric has a base structure which is a flattened array of a spirally wound multicomponent yarn. The flattened array has two layers, two sides, a length, a width and two widthwise edges. In each turn of the spiral winding, the multicomponent yarn has a substantially lengthwise orientation and is joined side-by-side to those adjacent thereto by a fusible thermoplastic material in each of the two layers. The multicomponent yarn forms seaming loops along the two widthwise edges. At least one layer of staple fiber material is needled into one of the two sides of the base structure and through the two layers. *Davenport*, Abstract.

In contrast, instant claim 26 recites:

“A textile structure made in a manner comprising the steps of:  
spiral winding machine direction (MD) yarns to form a system having a defined width; and  
depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns.” (emphasis added)

Nothing has been found in Davenport that teaches or suggests the above-identified features of claim 26. Specifically, Davenport does not teach or disclose depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns, as recited in claim 26.

In the Final Office Action, the Examiner asserts that Davenport teaches a woven base fabric having both MD yarns and CD interdigitated loops. However, instant claim 26 recites, *inter alia*, a pattern of CD elements and not CD interdigitated loops.

The Examiner refers to paragraphs [0018], [0049] and Fig. 6 of Davenport, which merely disclose “The lateral edges of the woven base fabric are then trimmed to render them parallel to its longitudinal (machine) direction. The angle between the machine direction of the woven base fabric and the helically continuous seam may be relatively small, that is, typically less than

10.degree. By the same token, the lengthwise (warp) yarns of the woven fabric strip make the same relatively small angle with the longitudinal (machine) direction of the woven base fabric. Similarly, the crosswise (filling) yarns of the woven fabric strip, being perpendicular to the lengthwise (warp) yarns, make the same relatively small angle with the transverse (cross-machine) direction of the woven base fabric. In short, neither the lengthwise (warp) nor the crosswise (filling) yarns of the woven fabric strip align with the longitudinal (machine) or transverse (cross-machine) directions of the woven base fabric.” Davenport further discloses “The flattened array 30 of bonded multicomponent yarns 16 is then folded and the two ends 32 brought together. Thin strips of insulating material 26 are peeled back to expose loops 34, 36 and loops 36 of the two ends 32 are interdigitated with one another. Pintle 38 is then directed through the passage formed by the interdigitated loops 36 to join ends 32 to one another at seam 40, as shown in FIG. 6.”

Merely because the warp and weft yarns of Davenport’s fabric strip make an angle and do not align with the MD or CD, it cannot be said that it teaches depositing a pattern of CD elements as recited in the instant claim. Similar to Rexfelt, Davenport also does not teach or disclose depositing a pattern of cross machine direction (CD) elements onto the system of MD yarns; wherein the CD elements are formed while being deposited onto the system of MD yarns as claimed in the instant invention.

Therefore Appellant respectfully submits to the Board that claim 26 patentably distinguishes over Davenport.

The Section 102(b) and 103(a) rejections based on Davenport should be reconsidered and withdrawn, and such relief is respectfully requested, with prompt issuance of a Notice of Allowance.



## II. DEPENDENT CLAIMS

The other claims are dependent from claim 26, discussed above, and are therefore believed patentable for at least the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

## CONCLUSION

For the reasons discussed above, claims 26-56 are patentable. It is, therefore, respectfully submitted that the rejection of claims 26-56 was in error. Therefore, Appellant respectfully requests a reversal of these rejections by this Honorable Board, with a prompt issuance of a Notice of Allowance, or such other relief that the Honorable Board deems just and fair.

The Commissioner is hereby authorized to charge any additionally required fee, or to credit any overpayment in such fees, to Deposit Account No. 50-0320.

Respectfully submitted,

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**APPENDIX I**

**CLAIMS ON APPEAL**

1. (Withdrawn) A method for forming a textile structure comprising the steps of: spiral winding machine direction (MD) yarns to form a system having a defined width; and depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns.

2. (Withdrawn) The method of claim 1, wherein the CD elements connect the MD yarns so to fix their position and stabilize the structure.

3. (Withdrawn) The method of claim 1, wherein the MD yarns are intermittently encapsulated by the CD elements along the length of the MD yarns.

4. (Withdrawn) The method of claim 1, wherein the CD elements extend the full width of said MD yarn system.

5. (Withdrawn) The method of claim 1, wherein the CD elements extend less than the full width of said MD yarn system.

6. (Withdrawn) The method of claim 1, wherein the textile structure formed is a forming, press, dryer, TAD, pulp forming, sludge filter, chemiwasher, or engineered fabric.

7. (Withdrawn) The method of claim 1, wherein said CD elements are created on said MD yarn system by depositing a polymer resin orthogonally thereto on one or both surfaces thereof so to obtain a system of CD elements interlocking with the MD yarns.

8. (Withdrawn) The method of claim 7, wherein the pattern created on the MD yarn system is varied by controlling said deposition of said polymer thereon.

9. (Withdrawn) The method of claim 8, wherein a speed of said deposition is controlled so as to adjust the amount of polymer on said MD yarn system.

10. (Withdrawn) The method of claim 7, wherein the polymer is delivered using one or more dispensers.

11. (Withdrawn) The method of claim 7, wherein the polymer is delivered to both surfaces of the MD yarn system so to join and subsequently bond the MD yarn system therebetween.

12. (Withdrawn) The method of claim 7, wherein the deposited polymer is curable by one of UV light or heat.

13. (Withdrawn) The method of claim 12, wherein the deposited polymer is subsequently cured to obtain a solid system of CD elements.

14. (Withdrawn) The method of claim 7, wherein the deposited polymer is molten polymer and is subsequently cooled to obtain a solid system of CD elements.

15. (Withdrawn) The method of claim 14, wherein the molten polymer is derived by melting monofilament used as feedstock.

16. (Withdrawn) The method of claim 1, wherein said CD elements are created on said MD yarn system by positioning CD monofilaments orthogonally thereto on one or both surfaces thereof; heating said CD monofilaments so they distort; and cooling said CD monofilaments to obtain a system of CD elements mechanically interlocking with the MD yarns.

17. (Withdrawn) The method of claim 16, wherein the CD monofilaments are positioned on both sides of the MD yarn system so to join and bond said MD yarn system therebetween.

18. (Withdrawn) The method of claim 16, wherein said CD monofilaments are bondable whilst maintaining its functional strength.

19. (Withdrawn) The method of claim 16, wherein said polymer is one of MXD6 and poly-m-xylylene adipamide.

20. (Withdrawn) The method of claim 16, wherein said CD monofilaments are bicomponent monofilaments having a sheath and a core, and the sheath has a melting point lower than the core.

21. (Withdrawn) The method of claim 1, wherein the textile structure formed is machine seamable or endless.

22. (Withdrawn) A device for spirally winding a system of MD yarns comprising: a first roll and a second roll, said rolls mounted horizontally and being parallel to each other; turn around means positioned in parallel between the first and second rolls and in the plane defined by the top surfaces of the two rolls, said turn around means including a first row of pins and a second row of pins; and whereby a yarn attached to a first pin at one end of the first pin row is unwound orthogonal to the rolls, initially contacting the top of the first roll and then spiraling around the bottom of said first roll, said yarn being further unwound orthogonal to said rolls so to first contact the bottom of the second roll and then spiraling around the top of said second roll, said yarn being further unwound orthogonal to said rolls and then looping around a second pin at one end of the second pin row, and said yarn being further unwound toward the second roll in a similar fashion so that said spiral winding is repeated until a system of MD yarns of a desired width is formed.

23. (Withdrawn) A device for forming a seam in a spirally wound system of MD yarns, comprising: a first row of pins and a second row of pins opposing said first row, each pin having an opening therethrough; and a moveable pintle for sliding through said pin openings, wherein respective MD yarns are successively positioned between respective pairs of adjacent pins, the pintle is slid forward so to capture the yarn, and the process is repeated until a seam is formed.

24. (Withdrawn) A device for forming a seam in a spirally wound system of MD yarns, comprising: a first row of vertically mounted pins; and a second row of vertically mounted pins, said second row opposite and parallel to said first row, wherein after each respective MD yarn is looped over a corresponding pin, said pin is rotated into a horizontal position so to lock the yarn in place for a finished seam.

25. (Withdrawn) A device for spirally winding a system of MD yarns comprising: a first roll and a second roll, said rolls mounted horizontally and being parallel to each other, whereby a yarn is unwound orthogonal to the rolls, initially contacting the top of the first roll and then spiraling around the bottom of said first roll, said yarn being further unwound orthogonal to said rolls so to first contact the bottom of the second roll and then spiraling around the top of said second roll, said yarn being further unwound orthogonal to said rolls toward the first roll in a similar fashion so that said spiral winding is repeated until a system of MD yarns of a desired width is formed.

26. (Previously Presented) A textile structure made in a manner comprising the steps of: spiral winding machine direction (MD) yarns to form a system having a defined width; and

depositing a pattern of cross machine direction (CD) elements onto said system of MD yarns; wherein said CD elements are formed while being deposited onto said system of MD yarns.

27. (Original) The textile structure claimed in claim 26, wherein the CD elements connect the MD yarns so to fix their position and stabilize the structure.

28. (Original) The textile structure claimed in claim 26, wherein the MD yarns are intermittently encapsulated by the CD elements along the length of the MD yarns.

29. (Original) The textile structure claimed in claim 26, wherein the CD elements extend the full width of said MD yarn system.

30. (Original) The textile structure claimed in claim 26, wherein the CD elements extend less than the full width of said MD yarn system.

31. (Original) The textile structure claimed in claim 26, wherein said CD elements are created on said MD yarn system by depositing a polymer resin orthogonally thereto on one or both surfaces thereof so to obtain a system of CD elements interlocking with the MD yarns.

32. (Original) The textile structure claimed in claim 31, wherein the pattern created on the MD yarn system is varied by controlling said deposition of said polymer thereon.

33. (Original) The textile structure claimed in claim 32, wherein a speed of said deposition is controlled so as to adjust the amount of polymer on said MD yarn system.

34. (Original) The textile structure claimed in claim 31, wherein the polymer is delivered using one or more dispensers.

35. (Original) The textile structure claimed in claim 31, wherein the polymer is delivered to both surfaces of the MD yarn system so to join and bond the MD yarn system therebetween.

36. (Original) The textile structure claimed in claim 31, wherein the deposited polymer is curable by one of UV light or heat.

37. (Original) The textile structure claimed in claim 36, wherein the deposited polymer is subsequently cured to obtain a solid system of CD elements.

38. (Original) The textile structure claimed in claim 31, wherein the deposited polymer is molten polymer and is subsequently cooled to obtain a solid system of CD elements.

39. (Original) The textile structure claimed in claim 38, wherein the molten polymer is derived by melting monofilament used as feedstock.

40. (Original) The textile structure claimed in claim 26, wherein said CD elements are created on said MD yarn system by positioning CD monofilaments orthogonally thereto on one or both surfaces thereof; heating said CD monofilaments so they distort; and cooling said CD monofilaments to obtain a system of CD elements mechanically interlocking with the MD yarns.

41. (Original) The textile structure claimed in claim 40, wherein the CD monofilaments are positioned on both sides of the MD system so to join and bond said MD yarn system therebetween.

42. (Original) The method of claim 40, wherein said CD monofilaments are a polymer able to be bondable whilst maintaining its functional strength.

43. (Previously Presented) The textile structure claimed in claim 42, wherein said polymer is one of MXD6 and poly-m-xylylene adipamide.

44. (Original) The textile structure claimed in claim 40, wherein said CD monofilaments are bicomponent monofilaments having a sheath and a core, and the sheath has a melting point lower than the core.

45. (Original) The textile structure claimed in claim 26, wherein the textile structure formed is machine seamable or endless.

46. (Original) The textile structure claimed in claim 26, wherein the textile structure formed is a forming, press, dryer, TAD, pulp forming, sludge filter, chemiwasher, or engineered fabric.

47. (Original) The textile structure claimed in claim 26, wherein the MD yarns are capable of being infinitely spaced apart or close together.

48. (Original) The textile structure claimed in claim 26, wherein the CD elements contribute to fabric stability and other functional characteristics such as permeability to air and/or water, structural void volume or caliper.

49. (Original) The textile structure claimed in claim 26, wherein materials used as the CD element are not readily extrudable.

50. (Original) The textile structure claimed in claim 26, wherein the CD elements acts as shute runners on a wear side of the structure, protecting the MD yarns.

51. (Original) The textile structure claimed in claim 26, wherein high abrasion resistant polymers are used as the CD element material.

52. (Original) The textile structure claimed in claim 26, wherein a layer of batt is affixed to one or both sides of the structure.

53. (Original) The textile structure claimed in claim 26, wherein one or more nonwoven layers are laminated to the textile structure with or without batt.

54. (Original) The textile structure claimed in claim 26, wherein the textile structure is permeable.

55. (Original) The textile structure claimed in claim 26, wherein said textile structure has a smooth sheet contact side.

56. (Original) The textile structure claimed in claim 26, which includes a resin coating rendering said textile structure impermeable.



**APPENDIX II**

**EVIDENCE**

None.

**APPENDIX III**  
**RELATED PROCEEDINGS**

None.